REMARKS

Applicants respectfully request reconsideration of the present application in view of the reasons that follow.

Claims 1-4 and 7-12 remain pending in this application with claims 10 and 11 being withdrawn.

Claim Rejections under 35 U.S.C. § 103

Claims 1-3 and 7-9 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,593,786 ("Parker") in view of U.S. Patent No. 5,419,969 ("Miyazaki"). Claims 4 and 12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Parker in view of Miyazaki and further in view of Okimura. In response, Applicants traverse the rejection for the reasons set forth below.

Applicants rely on MPEP § 2143.03, which requires that all words in a claim must be considered in judging the patentability of that claim against the prior art. Here, the cited references do not identically disclose, teach or suggest all the claim limitations. *See In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974).

Applicants respectfully submit that the combination of Miyzaki and Parker does not describe each and every element of the claims.

Independent claim 1 is directed to a "layered structure" comprising consecutively "an infra-red reflecting layered structure, said infra-red reflecting layered structure comprising: a first transparent substrate layer; a first metal oxide layer; a first silver containing layer; a second metal oxide layer; a second silver containing layer; a third metal oxide layer; a first adhesive layer; a second transparent substrate layer; a second adhesive layer; and a glass substrate." Independent claim 12 recites similar limitations.

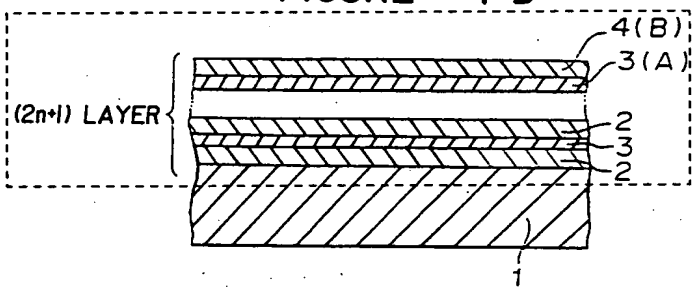
Without limitation to the claims, the Examiner is referred to Figs. 3, 5 and 6 of the application as filed. According to an exemplary embodiment, the infra-red reflecting layered structure comprising alternating metal oxide - silver containing layers is deposited on a plastic

substrate (for example a PET substrate). A second plastic substrate is laminated to the layered structure by means of an adhesive and the formed layered structure is then laminated to the glass by a second adhesive. As emphasized above the claimed structure comprises these layers consecutively.

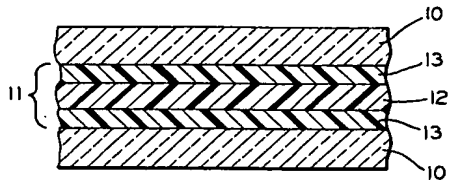
In contrast, the combination of Parker and Miyazaki does not disclose, teach or suggest each and every element recited in independent claims 1 and 12. Parker is directed to safety glass having a pair of glass sheets bonded together by an interlayer comprising two adhesive layers and a support layer. The support layer is thus laminated to two glass sheets by means of an adhesive layer on both surfaces of the support layer. The Office Action acknowledges that Parker does not disclose an infrared reflective coating. To cure the deficiencies of Parker, the Examiner relies on Miyazaki. This reliance is misplaced.

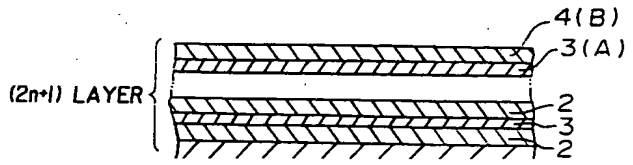
First, the combination of Parker and Miyazaki doe not disclose teach or suggest "a layered structure comprising consecutively" the structure described above. For example, the examiner asserts that Miyazaki discloses an infrared reflective coating, highlighted by the (2n+1) layer in Figure 1B of Miyazaki below.

FIGURE 1 B



If the highlighted structure were combined with the structure taught in Parker the following structure (a combination of Fig. 1B above and the Parker figure) would result shown below:





However, even if the structures of Miyazaki and Parker are combined, they do not disclose, teach or suggest "a layered structure comprising consecutively: an infra-red reflecting layered structure, said infra-red reflecting layered structure comprising: a first transparent substrate layer; a first metal oxide layer; a first silver containing layer; a second metal oxide layer; a second silver containing layer; a third metal oxide layer; a first adhesive layer; a second transparent substrate layer; a second adhesive layer; and a glass substrate."

That is, the claimed structure requires more than just laminating the optical stack to one or two glass sheets. The optical stack of the claimed layered structure, i.e. the stack that is responsible for the reflecting of the infra-red is the stack comprising:

- a first metal oxide layer,
- a first silver containing layer,
- a second metal oxide layer,
- a second silver containing layer,
- a third metal oxide layer.

Referring to Figure 3 of the published patent application, the optical stack corresponds with the layers 32/37/33/39/34/37'/35/39'/36. The optical stack is deposited on a transparent substrate layer (indicated with 31 in Figure 3). A preferred transparent substrate layer is PET (polyethylene terephtalate). Figure 5 and Figure 6 show the construction. In these figures, the optical stack deposited on a substrate layer (as shown in Figure 3) that corresponds with the layers 53 and 54 of Figure 5. The optical stack deposited on a substrate layer (=53 +54 in Fig. 5) is laminated to a second substrate (preferably a PET substrate) by means of an

adhesive. In Figure 5 the second substrate layer is indicated with 56; the adhesive layer corresponds with 55. The main function of the second substrate layer is to protect the optical stack during manufacturing handling and once adhered to the glass. The structure substrate layer 53 / optical stack 54 / adhesive layer 55 / substrate layer 56 is then adhered to a glass substrate 58 substrate by means of an adhesive 57.

Accordingly, the claimed layered structure can be summarized as a layered structure comprising:

- a first transparent substrate layer,
- the optical stack,
- a first adhesive layer,
- a second transparent substrate layer,
- a second adhesive layer and
- a glass substrate.

Accordingly, obtaining the layered structure as claimed in claim 1 requires more than just laminating the optical stack to one or two glass sheets.

Further, the Office Action states "it would have been obvious to one of ordinary skill in the art to apply the infrared reflecting coating on one of the glass substrate of Parker's laminated glazing unit used for automobiles, air planes, and building in order to provide low emissivity functions to the automobiles, air planes, and building as suggested by Miyazaki."

However, a prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984).

That is, Miyazaki clearly teaches away from "a first adhesive layer; a second transparent substrate layer; a second adhesive layer; and a glass substrate," as claimed because, as Miyazaki teaches, the ZnO, Ag and ZnO films are successively deposited directly on a glass substrate. *See* Fig. 1A-1C and Examples 1-4 in Cols. 9-10 (The oxide film 2 is attached directly to the glass substrate 1). Therefore, given the deposit teaching of the

Miyazaki reference, one of ordinary skill in the art would not have modified Miyazaki by Parker so that the ZnO, Ag and ZnO films were not deposited directly on the glass substrate.

Since the Federal Circuit has stated that "obviousness requires a suggestion of all limitations in a claim," Applicant respectfully submits that the Examiner has not properly set forth a *prima facie* case of obviousness. *CFMT, Inc. v. Yieldup Intern. Corp.*, 349 F.3d 1333, 1342 (Fed. Cir. 2003) (citing *In re Royka*, 490 F.2d 981, 985 (CCPA 1974)). (Emphasis added). In determining the differences between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious. *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983); *Schenck v. Nortron Corp.*, 713 F.2d 782, 218 USPQ 698 (Fed. Cir. 1983).

Here, the Office Action seeks to combine one reference which requires a low emissivity film to be deposited directly on a glass substrate with another reference which requires a support layer and adhesive layers be placed between two layers of glass to form safety glass. However, in view of the teachings of Miyazaki, it is unclear how the explicit teachings of these references can be combined to arrive at the novel arrangement claimed in claims 1 and 12. Accordingly, the combination of Miyazaki and Parker fail to disclose each and every limitation as claimed in independent claims 1 and 12.

When determining whether a claim is obvious, an examiner must make "a searching comparison of the claimed invention – *including all its limitations* – with the teaching of the prior art." *In re Ochiai*, 71 F.3d 1565, 1572 (Fed. Cir. 1995) (emphasis added). Thus, "obviousness requires a suggestion of all limitations in a claim." *CFMT, Inc. v. Yieldup Intern. Corp.*, 349 F.3d 1333, 1342 (Fed. Cir. 2003) (*citing In re Royka*, 490 F.2d 981, 985 (CCPA 1974)). Moreover, as the Supreme Court recently stated, "*there must be some articulated reasoning* with some rational underpinning to support the legal conclusion of obviousness." *KSR Int'l v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007) (quoting In re Kahn, 441 F.3d 977, 988 (Fed. Cir. 2006) (emphasis added)).

Accordingly, Applicants respectfully request that the rejection be withdrawn and independent claims 1 and 12 be allowed. Claims 2-4 and 6-9 depend from claim 1 and should be allowed for the reasons set forth above. Further, Okimura fails to cure the deficiencies of Parker and Miyazaki.

Conclusion

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing or a credit card payment form being unsigned, providing incorrect information resulting in a rejected credit card transaction, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorize payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date 9/29/09

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